

WHAT IS CLAIMED IS:

1. A touch-sensing system comprising:  
a touch sensor configured to produce an electrical signal in response to a touch input;  
5 a touch-generating pad proximate to at least a portion of the touch sensor;  
and  
a tactile button associated with the touch-generating pad, the tactile button configured to provide tactile feedback and to couple to the touch-generating pad upon activation by a user, the touch sensor configured to detect the coupling of the tactile  
10 button with the touch-generating pad.
2. The touch-sensing system of claim 1, wherein the tactile button is configured to provide a responsive force in response to being pressed by the user, the responsive force being operative to provide tactile feedback to the user.
3. The touch-sensing system of claim 1, wherein coupling the tactile button  
15 with the touch-generating pad electrically couples the touch-generating pad to the touch sensor.
4. The touch-sensing system of claim 1, wherein the tactile button is located remotely from the touch pad.
5. The touch-sensing system of claim 1, wherein the tactile button is located  
20 behind the touch sensor.
6. The touch-sensing system of claim 1, wherein the tactile button has an electrical potential different than that of the touch-generating pad, and wherein the tactile button activates the touch-generating pad by electrically connecting to and changing the electrical potential of the touch-generating pad.

7. The touch-sensing system of claim 6, wherein the electrical potential of the tactile button is circuit ground.

8. The touch-sensing system of claim 1, wherein when the tactile button couples the touch-generating pad, the touch-generating pad is configured to mechanically  
5 contact the touch sensor sufficient to cause a detectable touch on the touch sensor.

9. The touch-sensing system of claim 1, wherein when the tactile button couples the touch-generating pad, the touch-generating pad is configured to break a light beam emitted by the touch sensor sufficient to cause a detectable touch on the touch sensor.

10. The touch-sensing system of claim 1, wherein when the tactile button couples the touch-generating pad, the touch-generating pad is configured to absorb the energy of an acoustic wave sufficient to cause a detectable touch on the touch sensor.

11. The touch-sensing system of claim 1, wherein when the tactile button couples the touch-generating pad, the touch-generating pad is configured to produce a  
15 vibration that is detectable as a touch on the touch sensor.

12. The touch-sensing system of claim 1, wherein the touch-generating pad is removably attached to the touch sensor.

13. The touch-sensing system of claim 1, wherein the touch-generating pad is permanently attached to the touch sensor.

20 14. The touch-sensing system of claim 1, wherein the tactile button includes texturing that enables the user to determine by a sense of touch the function of an input associated with the tactile button.

15. A system for interacting with a user comprising:

a display screen;

a touch sensor positioned in front of the display screen, the touch sensor being configured to produce a signal in response to a touch input;

5 a touch-generating pad positioned in front of the touch sensor, the touch-generating pad being configured such that the touch-generating pad, when not activated, does not cause a detectable touch on the touch sensor and, when activated, causes a detectable touch on the touch sensor; and

a tactile button associated with the touch-generating pad, the tactile button, when pressed by a user, being configured to activate the touch-generating pad.

10 16. The system of claim 15, wherein the tactile button is configured to provide a responsive force in response to being pressed by the user, the responsive force is sufficient to provide tactile feedback to the user.

17. The system of claim 15, wherein the tactile button is a snap dome button.

15 18. The system of claim 15, wherein the tactile button is a silicone elastomeric button.

19. The system of claim 15, wherein the tactile button is a rocker switch.

20. The system of claim 15, wherein the tactile button is a carbon button.

21. The system of claim 15, wherein the touch sensor is a capacitive touch sensor.

20 22. The system of claim 21, wherein when not activated, the touch-generating pad is configured not to capacitively couple with the touch sensor.

23. The system of claim 21, wherein in response to being activated, the touch-generating pad is configured to capacitively couple with the touch sensor.

24. The system of claim 15, wherein the touch sensor is a resistive touch sensor.

25. The system of claim 24, wherein if not active, the touch-generating pad is configured not to mechanically contact the resistive touch sensor.

5 26. The system of claim 24, wherein in response to being activated, the touch-generating pad is configured to mechanically contact the resistive touch sensor.

27. The system of claim 15, wherein the touch sensor is an optical touch sensor.

10 28. The system of claim 27, wherein when not active, the touch-generating pad is configured not to block light beams emitted by the optical touch sensor.

29. The system of claim 27, wherein in response to being activated, the touch-generating pad is configured to block a light beam emitted by the optical touch sensor.

30. The system of claim 15, wherein the touch sensor is a surface acoustic wave touch sensor.

15 31. The system of claim 30, wherein when not active, the touch-generating pad is configured not to absorb energy of acoustic waves emitted by the surface acoustic wave touch sensor.

20 32. The system of claim 30, wherein in response to being activated, the touch-generating pad is configured to absorb sufficient energy of the acoustic waves emitted by the surface acoustic wave touch sensor.

33. The system of claim 15, wherein the touch sensor is a vibration-sensing touch sensor.

34. The system of claim 33, wherein when not active, the touch-generating pad is configured not to cause vibrations in the vibration-sensing touch sensor.

35. The system of claim 33, wherein in response to being activated, the touch-generating pad is configured to cause vibrations that can be sensed by the vibration-sensing touch sensor.

36. A method for providing tactile feedback to a user of a touch-sensing system, the touch-sensing system includes a touch sensor, the method comprising:

attaching a touch-generating pad onto the touch sensor in such a way that when not activated, the touch-generating pad does not cause a touch on the touch sensor; and

in response to the user pressing a tactile button associated with the touch-generating pad, activating the touch-generating pad and providing tactile feedback to the user; and

in response to activating the touch-generating pad, causing a touch on the touch sensor.

37. The method of claim 36, wherein in response to the user pressing the tactile button, providing a responsive force as tactile feedback to the user.

38. The method of claim 36, wherein causing the touch on the touch sensor is performed by capacitively coupling the touch-generating pad with the touch sensor.

39. The method of claim 36, wherein causing the touch on the touch sensor is performed by a mechanical contact between the touch-generating pad and the touch sensor.

40. The method of claim 36, wherein causing the touch on the touch sensor is performed by blocking a light beam emitted by the touch sensor with the touch-generating pad.

41. The method of claim 36, wherein causing the touch on the touch sensor is performed by absorbing the energy of an acoustic wave emitted by the touch sensor using the touch-generating pad.

42. The method of claim 36, wherein causing the touch on the touch sensor is  
5 performed by impacting the touch sensor in a manner sufficient to cause a detectable vibration in the touch sensor.